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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,993	09/06/2006	Rainer Muller	A8396PCT-UT	4258

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EXAMINER	
BLACK, MELISSA ANN	

ART UNIT	PAPER NUMBER
3612	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/596,993	MULLER ET AL.	
	Examiner	Art Unit	
	MELISSA A. BLACK	3612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,12 and 19-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,12 and 19-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to Amendments and Remarks filed in RCE on March 9, 2010. Claims 1-4, 12 and 19-35 are currently pending in the application and rejected as set forth below.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-4, 12 and 19-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat # 6,565,040 to Fay et al in view of US Pat # 3,567,162 to Lea.

Re Claim 1, Fay et al discloses an insulation structure for the internal insulation of a vehicle, comprising an insulation package (20), implemented using an insulation, and a film (26) positioned next to external skin (28), wherein the insulation package (20) is constructed using distinct insulation regions (See Figures 1-3), which are implemented using a first insulation (24) whose insulation material is burn-through safe, and a second insulation (22) whose insulation material is burn-through unsafe, these insulation regions being positioned along a finite series and laid next to one another up to a final insulation region (See Figures 1-3), whose insulation material is exchanged in alternating sequence, wherein the insulation regions (20) are contoured to the contour of the external skin (28), and wherein the insulation package (20) is enveloped by the film (26) providing internal support to the insulation package and maintaining the shape of the insulation package. (Please see arguments below) Re Claim 2, Fay et al discloses the insulation package (20) is implemented homogeneously using a second insulation (22), whose insulation material is burn-through unsafe, in which a plurality of burn-through safe barrier

layers (24) are integrated wherein the insulation regions are contoured to the contour of the external skin, and wherein the insulation package (20) is enveloped by the film (26) providing internal support to the insulation package (20) and maintaining the shape of the insulation package (Please see arguments below).. RE Claim 4, Fay et al discloses a second insulation region, which is implemented using the burn-through unsafe insulation material (22) of the second insulation, is laid next to each of a first and a third insulation region (see figure 3) , which are equipped with the burn-through safe insulation material of the first insulation (24), and following the third and each further insulation region, which are equipped with the burn-through safe insulation material of the first insulation (24), a further insulation region is positioned, which is equipped with the burn-through unsafe insulation material of the second insulation (see figure 3). Re claim 12, Fay et al discloses wherein the plurality of burn-through safe barrier layers (24) are implemented using a material of high fire resistance, which is implemented as sufficiently resistant or insensitive to occurring fire or both, because of which propagation of the fire, which would flame against a surface region of the barrier layer in this situation, is prevented. Re Claims 34 and 35, Fay discloses that the insulation package is completely enveloped by the film (26, column 2, lines 51-53).

Fay et al fails to show the insulation package (20) is positioned inside an intermediate space between internal paneling and the external skin (28) of the vehicle.

Lea teaches the use of an insulation package (10) between an internal paneling (24) and an external skin (18) of the vehicle (see figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the internal paneling as taught by Lea on the device of Fay in order to protect the insulation package from damage during everyday wear and tear.

Re Claim 3, Fay et al, as modified fails to disclose wherein a first insulation region and an insulation region terminating the series are implemented using the insulation material of the first insulation.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to start and finish the insulation package with the same first insulation for it is a mere rearrangements of known parts and requires little to no skill in the art.

Re Claim 19, Fay et al discloses an insulation structure for the internal insulation of a vehicle subject to accidental exposure of the vehicle to a fire external to the vehicle, the insulation structure comprising an insulation package with an external skin of the vehicle, and the insulation package comprises: at least one barrier layer (24); at least one insulation region (22); and a film providing an external surface of the insulation package, wherein the at least one insulation region (22) is not capable of preventing burn-through of the fire, and the at least one barrier layer (24) is capable of preventing burn-through of the fire, and the at least one barrier layer (24) is positioned such that the insulation package is made burn through safe wherein the at least one barrier layer and the at least one insulation region (20) are contoured to the contour of the external skin, and wherein the insulation package is enveloped by the film (26), providing internal support to the insulation package (20) and maintaining the shape of the insulation package (20). Re claim 20, Fay et al discloses as wherein each of the at least one barrier layer is comprised of at least one burn-through safe (24). Re Claim 21, Fay et al discloses at least one

barrier layer is integrated in the at least one insulation region (see figures). Re Claim 22, Fay et al discloses two barriers layers (24). Re Claim 23, Fay et al discloses wherein at least one insulation region (22) is disposed between the to barrier layers (24). Re claim 24, Fay et al discloses that the barrier layers lead without interruption through the at least one insulation region and up to a peripheral edge of at least one insulation region (see Abstract). Re Claim 25, Fay et al discloses the use of vertical course of the plurality of barrier layers (24) is delimited by two inner vertically diametrically opposed and horizontally positioned boundary faces of at least two insulation regions (22) (see abstract). Re Claim 26, Fay et al disclose that the barrier layers (24) lead close to or press against two outer boundary faces of the at least one insulation region (22), the two outer boundary faces being horizontally diametrically opposing and vertically positioned. Re Claim 29, Fay et al disclose that the insulation package (20) is shaped to a curvature of the external skin (28) (see figures 1-3). Claims 30-33, Fay et al discloses the film and the at least one barrier layer is of a fire resistant material or fireproof fibrous material (see Columns 3-4), and the material is of a ceramic, a carbon, a silicate or combination thereof (column 4, lines 20-25), and wherein the film is completely enveloped by the film (column 3 line 4).

Re Claim 19, Fay et al fails to disclose the insulation package is positioned inside an intermediate space between internal paneling and the external skin of the vehicle.

Lea teaches the use of an insulation package (10) between an internal paneling (24) and an external skin (18) of the vehicle (see figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the internal paneling as taught by Lea on the device of Fay in order to protect the insulation package from damage during everyday wear and tear.

Re Claims 27 and 28, Fay et al fails to disclose that the insulation package is implemented as straight or zigzagged, or sinusoidal or cosinusoidal.

Lea teaches that the insulation package is implemented as straight or zigzagged, or sinusoidal or cosinusoidal (see Figure 1).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to made the package implemented as straight or zigzagged, or sinusoidal or cosinusoidal as taught by Lea on the device of Fay et al in order to thicken the insulation layer in between the external and inner panel furthermore it is a mere design choice.

Response to Arguments

3. Applicant's arguments filed March 9, 2010 have been fully considered but they are not persuasive. As to the Amendments to the independent claims 1, 2 and 19, it is unclear to the examiner how, Fay et al does not disclose this limitation. As can be seen in figures external skin (28) is contoured and the insulation package (20) is contoured with the external skin (28), and non of the insulation layers are shown sagging away from the rest of the layers, so therefore it is inherent that the film layer provides support to the insulation package. As for Applicants remarks that Fay et al is a research paper and is not testing the insulation according to FAA standards, Examiner would like applicant to point out where in the claims does it say "burn-through safe according to FAA standards", or in the specification for that matter. Therefore, Fay

et al reads on the claims, and these remarks are not found persuasive. As for Fay et al not having an internal wall/paneling, it would be obvious that once the insulation is used in an airplane that the airplane is going to have an internal panel. Plus that is what the secondary reference of Lea is for to show just that, the insulation between an internal and external wall. As to applicants remark that Fay fails to provide a structure for insulation in an aircraft that is separate from the skin, where is this claimed. No person having ordinary skill in the art would adopt the structure of Fay, which is merely adopted for testing of materials absent any practical insulation structure for an aircraft. Fay show testing for an insulation structure for use in an airplane, Examiner would have to respectfully disagree with applicant opinion; Fay is showing people that the materials they have chosen to test would make good insulation in an airplane. As for Applicants remarks that Lea doesn't show insulation contoured to the contour to the external wall, Examiner would like to direct applicant to the part of the figure that applicant cut out of the picture in remarks, take a look at the contour of outer wall 18 which can be seen really well along the frame member 20, and in figure 1, before the wall of the plane is broken from a catastrophic accident, the insulation is in the space between the internal (24) panel and the external (18) panel and therefore the insulation (36) would have to follow that contour. Therefore, Fay et al in view of Lea still read on the amended claims. If applicant strongly disagrees, Examiner suggests having the Board of Appeals decide.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELISSA A. BLACK whose telephone number is (571)272-4737. The examiner can normally be reached on M-F 7:00-3:30 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dayoan can be reached on (571) 272-6659. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Melissa A Black/

Examiner, Art Unit 3612

/GLENN DAYOAN/

Supervisory Patent Examiner, Art Unit 3612